

RECEIVED
CENTRAL FAX CENTER

MAY 02 2008

PATENT

U.S. Appln. S.N. 10/518,404
AMENDMENTIN THE CLAIMS:

Please amend claims 1-4 and 7-9, and add new claims 14-19, as shown below in the detailed listing of all claims which are, or were in this application:

1. (Currently amended) Process for the production of an assembly comprising several silicone elements crosslinked by the polyaddition of $\equiv\text{Si-H}$ units onto $\equiv\text{Si-alkenyl}$ [[(preferably $\equiv\text{Si-vinyl}$)] units, said elements adhering firmly to one another, comprising the following essential steps:

- (I) forming a silicone element (i) with a liquid silicone preparation (i) comprising:
 - polyorganosiloxanes (POS) A with $\equiv\text{Si-alkenyl}$ [[(preferably $\equiv\text{Si-vinyl}$)] units,
 - polyorganosiloxanes (POS) B with $\equiv\text{Si-H}$ units,
 - at least one metal catalyst C, [[preferably based on platinum,]]
 - optionally at least one POS resin D carrying $\equiv\text{Si-alkenyl}$ [[(preferably $\equiv\text{Si-vinyl}$)] units,
 - optionally at least one crosslinking inhibitor E,

MAY 02 2008

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

- optionally at least one adhesion promoter F,
 - optionally at least one mineral filler G,
 - optionally at least one functional additive H for imparting specific properties,
- (II) crosslinking the liquid silicone preparation (i) formed in step (I), the composition of this preparation and the crosslinking conditions being chosen in such a way that the crosslinked silicone element (i) has a surface density SD of unreacted, residual alkenyl [[preferably vinyl]] groups, per nm², defined as follows:
- $$SD \geq 0.0015,$$
- $$[[preferably \quad SD \geq 0.0030,$$
- and particularly preferably $0.0100 \geq SD \geq 0.0040.$]]
- (III) optionally repeating steps (I) and (II) n times (n = positive integer) to give n elements (i) that adhere to one another,
- (IV) forming a silicone element (ii) by bringing the crosslinked silicone element or last crosslinked silicone element (i) into

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

contact with a liquid silicone preparation (ii) comprising:

- polyorganosiloxanes (POS) A' with $\equiv\text{Si}$ -alkenyl $[(\text{preferably } \equiv\text{Si-vinyl})]$ units,
- polyorganosiloxanes (POS) B' with $\equiv\text{Si-H}$ units,
- at least one metal catalyst C', $[(\text{preferably based on platinum})]$,
- optionally at least one POS resin D' carrying $\equiv\text{Si}$ -alkenyl $[(\text{preferably } \equiv\text{Si-vinyl})]$ units,
- optionally at least one crosslinking inhibitor E',
- optionally at least one adhesion promoter F',
- optionally at least one mineral filler G',
- optionally at least one functional additive H' for imparting specific properties,

- (V) crosslinking the liquid silicone preparation (ii) formed in step $[(\text{III})]$ (IV) to give the crosslinked silicone element (ii) that adheres to the element or last element (i).

2. (Currently amended) Process according to claim 1, wherein a ratio R of the $\equiv\text{Si-H}$ units to the $\equiv\text{Si}$ -alkenyl $[(\text{preferably } \equiv\text{Si-})]$

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

vinyl)]] units in the selected liquid silicone preparation (i) is defined as follows:

$$R \leq 1[[,$$

$$\text{preferably } 0.80 \leq R \leq 0.98]].$$

3. (Currently amended) Process according to claim 2, wherein the selected liquid silicone preparation (i) comprises at least one hyperalkenylated [[(preferably hypervinylated)]] POS A providing $\equiv\text{Si-alkenyl}$ [[(preferably $\equiv\text{Si-vinyl}$)] units, whose content is greater than or equal to at least 2% by number, [[preferably greater than or equal to at least 3% and particularly preferably between 3 and 10% by number,]] the $\equiv\text{Si-alkenyl}$ [[(preferably $\equiv\text{Si-vinyl}$)] units advantageously being carried essentially by siloxy units D: $-\text{R}_2\text{SiO}_{2/2}-$.

4. (Currently amended) Process according to claim 1, wherein:

- the assembly produced comprises a [[preferably]] flexible substrate and several crosslinked silicone elements forming a multilayer coating adhering to the substrate;
- and:
 - step (I) comprises applying the liquid silicone preparation

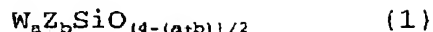
U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

- (i) to the substrate to form a crosslinked silicone layer (i),
- and step (IV) comprises applying the liquid silicone preparation (ii) to the crosslinked silicone layer or last crosslinked silicone layer (i) carrying residual reactive groups on the surface, to form a crosslinked silicone layer (ii).
5. (Previously presented) Process according to claim 1, wherein the assembly produced is a silicone mold or molded object.
6. (Previously presented) Process according to claim 1, wherein steps (IV) and (V) are only carried out after a prolonged interruption of the process.
7. (Currently amended) Process according to claim 4, wherein the second and last liquid silicone preparation is [[identical to or, preferably,]] different from the first and[[, particularly preferably,]] is devoid of hyperalkenylated POS A°.
8. (Currently amended) Process according to claim 1, wherein the chosen POS (A & A') have siloxy units of the formula

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT



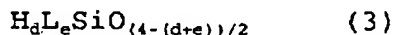
in which:

- the symbols W, which are identical or different, are each an alkenyl group [[and preferably a C₂-C₆ alkenyl]];
- the symbols Z, which are identical or different, are each a non-hydrolyzable monovalent hydrocarbon group that is devoid of an unfavorable action on the activity of the catalyst, is optionally halogenated and is [[preferably]] selected from alkyl groups having from 1 to 8 carbon atoms inclusive, and from aryl groups;
- a is 1 or 2, b is 0, 1 or 2 and a + b is between 1 and 3;
- optionally at least some of the other units are units of the empirical formula



in which Z is defined as above and c has a value of between 0 and 3.

9. (Currently amended) Process according to claim 1, wherein the chosen POS (B & B') have siloxy units of the formula



in which:

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

- the symbols L, which are identical or different, are each a non-hydrolyzable monovalent hydrocarbon group that is devoid of an unfavorable action on the activity of the catalyst, is optionally halogenated and is [[preferably]] selected from alkyl groups having from 1 to 8 carbon atoms inclusive, and from aryl groups;
- d is 1 or 2, e is 0, 1 or 2 and d + e has a value of between 1 and 3;
- optionally at least some of the other units being units of the empirical formula



in which L is as defined above and g has a value of between 0 and 3.

10. (Previously presented) Process according to claim 1, wherein the alkenyl groups W of the POS (A & A') and/or of the POS resins (D & D') are vinyl groups Vi carried by siloxy units D and optionally M and/or T.

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

11. (Withdrawn) Liquid silicone formulation which can be used especially as a liquid silicone preparation (i) in the process according to claim 1, and which comprises:

- polyorganosiloxanes (POS) A with $\equiv\text{Si}$ -alkenyl (preferably $\equiv\text{Si}$ -vinyl) units,
- polyorganosiloxanes (POS) B with $\equiv\text{Si}$ -H units,
- at least one metal catalyst C, preferably based on platinum,
- optionally at least one POS resin D carrying $\equiv\text{Si}$ -alkenyl (preferably $\equiv\text{Si}$ -vinyl) units,
- optionally at least one crosslinking inhibitor E,
- optionally at least one adhesion promoter F,
- optionally at least one mineral filler G,
- optionally at least one functional additive H for imparting specific properties,

wherein a ratio R of $\equiv\text{Si}$ -H units to $\equiv\text{Si}$ -alkenyl (preferably $\equiv\text{Si}$ -vinyl) units is defined as follows:

$$R \leq 1,$$

preferably $0.80 \leq R \leq 0.98$.

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

12. (Withdrawn) Formulation according to claim 10, wherein its content of $\equiv\text{Si}$ -alkenyl (preferably $\equiv\text{Si}$ -vinyl) units is greater than or equal to at least 2% by number, preferably greater than or equal to at least 3% and particularly preferably between 2 and 10% by number, the $\equiv\text{Si}$ -alkenyl (preferably $\equiv\text{Si}$ -vinyl) units advantageously being carried essentially by siloxy units D: $-\text{R}_2\text{SiO}_{2/2}-$.

13. (Withdrawn) Multilayer crosslinked silicone elastomer coating obtainable by the process according to claim 1, wherein it has a layer delamination resistance, measured by a test T, greater than 1 N/cm, preferably greater than 2 N/cm and particularly preferably greater than 3 N/cm.

14. (New) The process of claim 1, wherein said $\equiv\text{Si}$ -alkenyl units comprise $\equiv\text{Si}$ -vinyl units.

15. (New) The process of claim 1, wherein said residual alkenyl groups comprise vinyl groups.

16. (New) The process of claim 1, wherein said surface density SD is $\text{SD} \geq 0.0030$.

U.S. Appln. S.N. 10/518,404
AMENDMENT

PATENT

17. (New) The process of claim 16, wherein said surface density SD is $0.0100 \geq SD \geq 0.0040$.

18. (New) The process of claim 3, wherein said liquid silicone preparation (i) comprises at least one hypervinylated POS A providing $\equiv\text{Si-vinyl}$ units whose content is between 3 and 10% by number.

19. The process of claim 9, wherein said alkenyl group is a $\text{C}_2\text{-C}_6$ alkenyl.